Long-term monitoring of arrhythmias in cardiac sarcoidosis

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Introduction: Screening for cardiac sarcoidosis (CS) is recommended since it can manifest with ventricular arrhythmias (VA), atrioventricular conduction block (AVB) and sudden cardiac death (SCD). However, risk stratification for SCD is challenging, in particular in patients without overt cardiac symptoms.

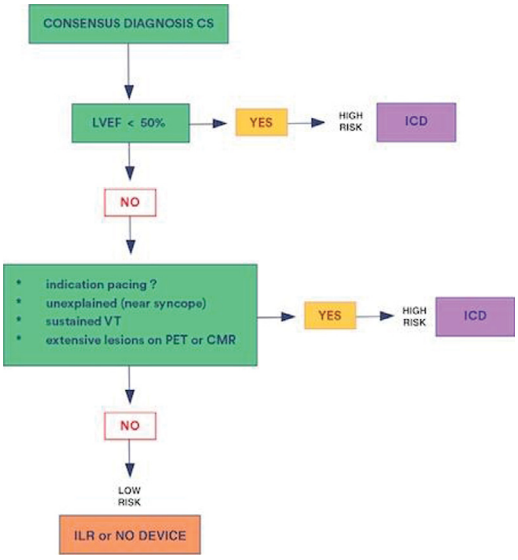
Purpose: This study reports the practice-based risk stratification for SCD and the incidence of arrhythmias and mortality in CS patients by long-term monitoring of arrhythmias.

Methods: A retrospective, single center cohort study was performed in 537 patients with sarcoidosis screened for cardiac involvement with cardiac MRI and fluorodeoxyglucose PET in an hospital, a Dutch tertiary referral center. CS was diagnosed in 115 of 537 patients (21%), complete follow up was available in 108 patients (94%). After risk assessment for SCD (figure 1) an ICD was implanted in 16 high-risk patients. Within the92 low-risk patients, 80 had an internal loop recorder (ILR) implanted and 12 patients received no device. Chart review was performed to assess the occurrence of VA, AVB, death, ICD therapy and device related complications.

Results: During a mean follow-up of 31±15 months, 9 out of 80 ILR patients (11.3%) received an ICD of whom 7 (8.8%) based on recorded arrhythmias (VA in 5 and AVB in 2 patients).

Five out of the total 25 ICD patients (20%) experienced sustained VA successfully treated with anti-tachycardia pacing in 2 (8%) and terminated spontaneously in all other patients. Two ICD patients experienced a mild pocket infection, treated with antibiotics. Two deaths occurred in the low-risk patients: 1 non-cardiac death and 1 SCD due to asystole.

Conclusion: The practice-based risk stratification supported an ICD implantation in up to 5% of sarcoidosis patients screened for CS. Sustained VA occurred in 20% of ICD patients.Early detection of important arrhythmias with an ILR can optimize risk assessment for SCD in CS.



Practise-based risk stratification